

Amendments to the Claims

1-19 (Canceled)

20. (Currently Amended) A separation membrane comprising,

(a) a tubular braid support for a hollow fiber separation membrane made of a collection of shrunken yarns from 16 to 60 separate yarns, each yarn being between 150 and 400 denier, the tubular braid support having an outside diameter between 1.5 and 2.5 mm and a wall thickness greater than 0.2 mm and less than 1.0 mm, the tubular braid support having at least 30 picks per inch; and,

(b) a porous substance attached to the support after the yarns have been shrunken, the porous substance covering the outer circumferential surface of the support, the porous substance being between 0.05 and 0.3 mm thick beyond the outer surface of the support and having pores suitable for use as a separation membrane.

21. (Currently Amended) The membrane of claim 20 wherein the yarns are shrunken to a stable length before the porous substance is attached to the support and the support with shrunken yarns has an extension at break of at least 10%.

22. (Previously Presented) The membrane of claim 20 wherein the support has a pre-shrunk length that is at least 1% less than an un-shrunk length of the support.

23. (Previously Presented) The membrane of claim 22 wherein the support has a pre-shrunk length that is between 1% and 20% less than an un-shrunk length of the support.

24. (Previously Presented) The membrane of claim 23 wherein the support has a pre-shrunk length that is between 1% and 8% less than an un-shrunk length of the support.

25. (Currently Amended) The membrane of [[a]] claim 20 wherein the support is flexible[[,] and macroporous ~~and tubular~~.

26. (Previously Presented) The membrane of claim 21 wherein the support has an extension at break of at least 20%.

27. (Previously Presented) The membrane of claim 20 wherein the air permeability of the support without the porous substance attached is at least 1 cc/sec/cm² at 1.378 kPa.

28. (Previously Presented) The membrane of claim 27 wherein the air permeability of the support without the porous substance attached is less than about 10 cc/sec/cm² at 1.378 kPa.

29-31 (Cancelled)

32. (Previously Presented) The membrane of claim 20 wherein the support is not embedded in the porous substance.

33-39 (Canceled)

40. (Currently Amended) The membrane of claim 20 wherein the support ~~comprises at least 16 separate yarns and is woven with from 1 to 3 multifilament ends with at least 30 picks (crosses/inch)~~.

41. (Currently Amended) The membrane of claim 21 40 wherein the support comprises ~~from about 16 to 60 separate yarns, each on its own carrier, each yarn being multifilament 150 to 500 denier (g/9000m) yarn, each a multifilament being made with from 25 to 750 40 to 100 filaments, each filament being from 0.5 to 7 3 to 6 denier, and is woven with from 1 to 3 multifilament ends at from 30 to 45 picks (crosses/inch), with a wall thickness in the range from about 0.2 mm but less than three times the diameter of the yarns.~~

42. (Currently Amended) The membrane of ~~any~~ of claim 38 20 wherein the support has separate yarns are woven in a pattern selected from Diamond, Regular or Hercules.

43. (Currently Amended) The membrane of claim 20 wherein the support comprises a tubular braid woven with ~~from 1 to 3~~ yarns having a plurality of multifilament ends, and the ends are non-plied in each yarn but lie linearly adjacent each other until taken up to form the braid.

44. (Previously Presented) The membrane of claim 20 wherein the porous substance has pores of a size suitable for use as a microfiltration or ultrafiltration membrane.

45. (Previously Presented) The membrane of claim 20 wherein the support has a moisture regain of .2% to 7% by weight.

46. (Withdrawn) A process of making a separation membrane comprising the steps of,

(a) providing a support for a hollow fiber separation membrane made of a collection of shrunken yarns; and,

(b) attaching a porous substance to the support after the yarns have been shrunken, the porous substance covering the outer circumferential surface of the support and having pores suitable for use as a separation membrane.

47. (Withdrawn) The process of claim 46 wherein the yarns are shrunken to a stable length and the support with shrunken yarns has an extension at break of at least 10%.

48. (Currently Amended) A separation membrane comprising,

(a) a support for a hollow fiber separation membrane made ~~of a collection of~~ from yarns braided into a tube, each yarn being between 200 and 400 denier, with from 16 to 60 carriers; and,

(b) a porous substance attached to and covering the outer circumferential surface of the support and having pores suitable for use as a separation membrane,

wherein,

~~(c) the air permeability of the support without the porous substance attached is at least 1 cc/sec/cm² at 1.378 kPa; and,~~

~~(d) the support has at least 30 36 crosses per inch, an outside diameter of between 1.5 mm and 2.5 mm and a wall thickness of more than 0.15 mm and less than 0.5 mm.~~

49. (Previously Presented) The membrane of claim 48 wherein the support comprises at least 16 separate yarns and is woven with from 1 to 3 multifilament ends.

50. (Currently Amended) The membrane of claim 49 wherein the support comprises ~~from about 16 to 60 separate yarns, each on its own carrier, each yarn being multifilament 150 to 500 denier (g/9000m) yarn, each a multifilament being made with from 25 to 750 40 to 100 filaments, each filament being from 0.5 to 7 3 to 6 denier, and is woven with from 1 to 3 multifilament ends at from 30 to 45 picks (crosses/inch), with a wall thickness in the range from about 0.2 mm but less than three times the diameter of the yarns.~~

51. (Currently Amended) The membrane of claim 48 wherein the support has ~~separate~~ yarns are woven in a pattern selected from Diamond, Regular or Hercules.

52. (Currently Amended) The membrane of claim 48 wherein the support comprises a tubular braid woven with yarns having from 1 to 3 non-plied multifilament ends, ~~and the ends are non-plied in each yarn but lie linearly adjacent each other until taken up to form the braid.~~

53. (Previously Presented) The membrane of claim 48 wherein the air permeability of the support without the porous substance attached is less than about 10 cc/sec/cm² at 1.378 kPa.

54. (Previously Presented) The membrane of claim 48 wherein the yarns are pre-shrunken to a stable length.

55. (Currently Amended) The membrane of claim[[s]] 48 wherein the support has an extension at break of at least 10%.

56. (Previously Presented) The membrane of claim 48 wherein the support has a pre-shrunk length that is at least 1% less than an un-shrunk length of the support.

57. (Previously Presented) The membrane of claim 56 wherein the support has a pre-shrunk length that is between 1% and 20% less than an un-shrunk length of the support.

58. (Previously Presented) The membrane of claim 57 wherein the support has a pre-shrunk length that is between 1% and 8 % less than an un-shrunk length of the support.

59. (Currently Amended) The membrane of claim 48 wherein the support is flexible[[,]] and macroporous and tubular.

60. (Previously Presented) The membrane of claim 48 wherein the support has an extension at break of at least 20%.

61. (Previously Presented) The membrane of claim 48 wherein the porous substance is at least 0.05 mm thick from the outer surface of the support to the outside of the porous substance.

62. (Currently Amended) The membrane of claim 61 wherein the porous substance is between 0.5 0.05 mm and 3.0 mm thick beyond the outer surface of the support to the outside of the porous substance.

63. (Previously Presented) The membrane of claim 48 wherein the porous substance is less than 2.0 mm thick beyond the outer surface of the support to the outside of the porous substance.

64. (Previously Presented) The membrane of claim 48 wherein the support is not embedded in the porous substance.

65-69 (Canceled)

70. (Previously Presented) The membrane of claim 48 wherein the porous substance has pores of a size suitable for use as a microfiltration or ultrafiltration membrane.

71. (Previously Presented) The membrane of claim 48 wherein the support has a moisture regain of .2% to 7% by weight.

72. (New) The membrane of claim 20 wherein each yarn is on its own carrier.

73. (New) The membrane of claim 48 wherein the support has a rough and uneven surface formed by the overlapping yarns.